

#### **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A guiding catheter system, comprising:

a flexible shaft having a distal end shaped for accessing a target vessel; and  
a handle assembly movably coupled to the flexible shaft, the handle assembly comprising a guide member attached to the shaft and a housing movably coupled to the guide member via a multiple-slot and pin arrangement, the flexible shaft selectably movable between a plurality of discrete indexing positions of a first degree-of-freedom defined relative to the flexible shaft, the flexible shaft restrained in the first degree-of-freedom at each indexing position of the plurality of discrete indexing positions by the multiple-slot and pin arrangement, the flexible shaft movable through a predetermined displacement of a second degree-of-freedom defined relative to the flexible shaft at each indexing position of the plurality of discrete indexing positions; and

wherein the slot and pin arrangement includes a serpentine slot provided on the guide member slidably coupled to a pin provided on the housing, and motion of the flexible shaft relative to the handle assembly results in a controllable sweeping motion at the distal end of the flexible shaft.

2. (Original) The guiding catheter system of claim 1, wherein the first degree-of-freedom comprises a longitudinal displacement relative to the flexible shaft, and the second degree-of-freedom comprises an axial rotation relative to the flexible shaft.

3. (Original) The guiding catheter system of claim 1, wherein the first degree-of-freedom comprises an axial rotation relative to the flexible shaft, and the second degree-of-freedom comprises a longitudinal displacement relative to the flexible shaft.

4. (Original) The guiding catheter system of claim 1, further comprising a tightening member provided between the flexible shaft and the handle assembly, the tightening member providing a releasable coupling between the flexible shaft and the handle assembly.

5. (Original) The guiding catheter system of claim 4, wherein the flexible shaft is slidably positionable relative to the handle assembly in a released orientation of the tightening member, thereby allowing the flexible shaft to be adjustably positioned relative to the handle.

6. (Original) The guiding catheter system of claim 4, wherein the tightening member comprises a rotating hemostatic valve seal.

7. (Currently amended) The guiding catheter system of claim 1, wherein ~~the handle assembly comprises a housing, and a~~ the guide member is attached to the flexible shaft[[,]] and the guide member is restrained by the serpentine slot and pin arrangement in the first-degree-of freedom relative to the housing at each indexing position of the plurality of indexing positions and movable relative to the housing through the displacement of the second degree-of-freedom at each indexing position of the plurality of indexing positions.

8-17. (Canceled).

18. (Previously presented) A catheter assembly, comprising:
- a flexible shaft having a distal end shaped for accessing a target vessel;
  - means for selectably moving the shaft between a plurality of discrete indexing positions of a first degree-of-freedom defined relative to the flexible shaft;
  - means for restraining a motion of the shaft in the first degree-of-freedom at each indexing position of the plurality of discrete indexing positions with a multiple-slot and pin arrangement; and
  - means for moving the flexible shaft through a second degree-of-freedom defined relative to the flexible shaft at each indexing position of the plurality of discrete indexing positions.
19. (Previously presented) The catheter assembly of claim 18, wherein the first degree-of-freedom comprises a longitudinal displacement relative to the flexible shaft, and the second degree-of-freedom comprises an axial rotation relative to the flexible shaft.
20. (Previously presented) The guiding catheter system of claim 18, wherein the first degree-of-freedom comprises an axial rotation relative to the flexible shaft, and the second degree-of-freedom comprises a longitudinal displacement relative to the flexible shaft.
21. (New) A guiding catheter system, comprising:
- a flexible shaft having a distal end shaped for accessing a target vessel; and
  - a handle assembly movably coupled to the flexible shaft, the handle assembly comprising a guide member attached to the shaft and a housing movably coupled to the guide member via a multiple-slot and pin arrangement, the flexible shaft selectably movable between a plurality of discrete indexing positions of a first degree-of-freedom defined relative to the flexible shaft, the flexible shaft restrained in the first degree-of-freedom at each indexing position of the plurality of discrete indexing positions by the multiple-slot and pin arrangement, the flexible shaft movable through a predetermined displacement of a

second degree-of-freedom defined relative to the flexible shaft at each indexing position of the plurality of discrete indexing positions; and

wherein the slot and pin arrangement includes a serpentine slot provided on the housing slidably coupled to a pin provided on the guide member, and motion of the flexible shaft relative to the handle assembly results in a controllable sweeping motion at the distal end of the flexible shaft.

22. (New) The guiding catheter system of claim 21, wherein the first degree-of-freedom comprises a longitudinal displacement relative to the flexible shaft, and the second degree-of-freedom comprises an axial rotation relative to the flexible shaft.

23. (New) The guiding catheter system of claim 21, wherein the first degree-of-freedom comprises an axial rotation relative to the flexible shaft, and the second degree-of-freedom comprises a longitudinal displacement relative to the flexible shaft.

24. (New) The guiding catheter system of claim 21, further comprising a tightening member provided between the flexible shaft and the handle assembly, the tightening member providing a releasable coupling between the flexible shaft and the handle assembly.

25. (New) The guiding catheter system of claim 24, wherein the flexible shaft is slidably positionable relative to the handle assembly in a released orientation of the tightening member, thereby allowing the flexible shaft to be adjustably positioned relative to the handle.

26. (New) The guiding catheter system of claim 24, wherein the tightening member comprises a rotating hemostatic valve seal.

27. (New) The guiding catheter system of claim 21, wherein the guide member is attached to the flexible shaft and the guide member is restrained by the serpentine slot and pin

arrangement in the first-degree-of freedom relative to the housing at each indexing position of the plurality of indexing positions and movable relative to the housing through the displacement of the second degree-of-freedom at each indexing position of the plurality of indexing positions.